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Abstract

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PI Title:

Project Title: EXERCISE INTERVENTION TO REDUCE RECURRENT PREECLAMPSIA

Abstract: *Exercise has positive effects on the cardiovascular, metabolic, endocrine, and immune systems. Preeclampsia, a hypertensive disorder of pregnancy, has many common risk factors, and a common pathway, namely endothelial activation, with cardiovascular disease. For women who experience preeclampsia in more than one pregnancy, there is an increased risk of cardiovascular disease in later life. Similarities in cardiovascular disease and preeclampsia led to the conclusion that exercise would be an effective intervention in reducing the recurrence of preeclampsia. Reduction in recurrence of preeclampsia is the primary outcome of this study. The secondary aims are to examine the effect of a moderate intensity exercise intervention on markers of the metabolic syndrome in sedentary pregnant women, and to explore the usual health behaviors, self-efficacy, and differences in health behaviors adopted during pregnancy. To test these hypotheses, we propose a randomized clinical trial to examine the effects of a moderate intensity exercise during pregnancy. Multiparous women who had preeclampsia in a previous pregnancy will be enrolled and randomized to one of two groups. The control group will receive usual care, and the intervention group will receive an exercise intervention. The exercise intervention will consist of 30 minutes of moderate intensity physical activity performed on 5 days per week, and short bouts of exercise (3-10 minute episodes of walking) will be encouraged. Projection of sample size, 160 women per group, was based on the dichotomous primary outcome, a reduction of recurrence from 20 percent to 10 percent and accounts for 10 percent attrition. Juried diagnosis by a panel of clinical experts based on stringent clinical criteria for preeclampsia will be used to determine pregnancy outcome. Fasting serum and plasma samples will be obtained at baseline (first trimester), and at two subsequent times*

(once in the second and third trimester). Subjects will complete an interview to recall physical activity over the past 7 days, and will respond to questionnaires about health promoting lifestyle activities and exercise self-efficacy. This study will contribute to a program of research directed at health promoting lifestyle behaviors in women who are at risk for high-risk pregnancy.

Thesaurus Terms:

disease /disorder prevention /control, exercise, health behavior, human therapy evaluation, preeclampsia, relapse /recurrence, women's health clinical trial, parity behavioral /social science research tag, clinical research, female, human pregnant subject

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